

This is a special issue of
Linear Algebra and Its Applications
 in honor of Alan J. Hoffman
 on his 65th birthday

Special Editors: Robert E. Bixby, Uriel G. Rothblum, and
 Alexander Schrijver

Preface	1
JAMES B. SHEARER (Yorktown Heights, New York) On the Distribution of the Maximum Eigenvalue of Graphs	17
JON LEE (New Haven, Connecticut) Subspaces with Well-Scaled Frames	21
D. K. RAY-CHAUDHURI (Columbus, Ohio) AND N. M. SINGHI (Colaba, India) q -Analogues of t -Designs and Their Existence	57
CARL D. MEYER (Raleigh, North Carolina) Uncoupling the Perron Eigenvector Problem	69
DIETER JUNGnickEL (Gießen, Germany) Partial Spreads Over \mathbb{Z}_q	95
J. A. THAS (Gent, Belgium) Interesting Pointsets in Generalized Quadrangles and Partial Geometries	103
A. A. IVANOV AND S. V. SHPECTOROV (Moscow, Russia) The Association Schemes of Dual Polar Spaces of Type ${}^2A_{2d-1}(p^f)$ Are Characterized by Their Parameters if $d \geq 3$	133
A. NEUMAIER (Freiburg, West Germany) Graph Representations, Two-Distance Sets, and Equiangular Lines	141
A. SCHRIJVER (Tilburg, The Netherlands) Homotopy and Crossings of Systems of Curves on a Surface	157
JOEL E. COHEN (New York, New York), EZIO MARCHI, AND JORGE A. OVIEDO (San Luis, Argentina) Perturbation Theory of Completely Mixed Bimatrix Games	169

Table of Contents Continued

RICHARD A. BRUALDI AND T. S. MICHAEL (Madison, Wisconsin) The Class of Matrices of Zeros, Ones, and Twos with Prescribed Row and Column Sums	181
PETER J. CAMERON (London, England) A Problem on Integer Matrices	199
A. M. H. GERARDS (Tilburg, The Netherlands) A Short Proof of Tutte's Characterization of Totally Unimodular Matrices	207
P. DELSARTE (Brussels, Belgium) AND J. J. SEIDEL (Eindhoven, The Netherlands) Fisher Type Inequalities for Euclidean t -Designs	213
R. W. COTTLE (Stanford, California), J.-S. PANG (Baltimore, Maryland), AND V. VENKATESWARAN (Holmdel, New Jersey) Sufficient Matrices and the Linear Complementarity Problem	231
GEORGE B. DANTZIG (Stanford, California) Making Progress During a Stall in the Simplex Algorithm	251
ROY MESHULAM (New Brunswick, New Jersey) On Two Extremal Matrix Problems	261
A. E. BROUWER (Eindhoven, The Netherlands) AND A. NEUMAIER (Freiburg, West Germany) The Graphs with Spectral Radius Between 2 and $\sqrt{2 + \sqrt{5}}$	273
ROBERT E. BIXBY AND ARVIND RAJAN (Houston, Texas) A Short Proof of the Truemper-Tseng Theorem on Max-Flow Min-Cut Matroids	277
A. V. KARZANOV (Moscow, Russia) Polyhedra Related to Undirected Multicommodity Flows	293
ANDRÁS FRANK AND ÉVA TARDOS (Budapest, Hungary) An Application of Submodular Flows	329
URI N. PELED AND MURALI K. SRINIVASAN (Chicago, Illinois) The Polytope of Degree Sequences	349
W. H. HAEMERS (Tilburg, The Netherlands) AND D. G. HIGMAN (Ann Arbor, Michigan) Strongly Regular Graphs with Strongly Regular Decomposition	379
DAVID CARLSON (San Diego, California) AND DANIEL HERSHKOWITZ (Haifa, Israel) Nonsingularity Criteria for General Combinatorially Symmetric Matrices	399

Table of Contents Continued

B. CURTIS EAVES (Stanford, California) AND	
URIEL G. ROTHBLUM (Haifa, Israel)	
A Continuous-Time Average-Cost Flexible Manufacturing and Operator Scheduling Model Solved by Deconvexification Over Time	417
HUI HU (DeKalb, Illinois) AND QING WANG	
(New Haven, Connecticut)	
On Approximate Solutions of Infinite Systems of Linear Inequalities	429
L. LOVÁSZ (Budapest, Hungary), M. SAKS	
(New Brunswick, New Jersey), AND	
A. SCHRIJVER (Tilburg, The Netherlands)	
Orthogonal Representations and Connectivity of Graphs	439
V. CHVÁTAL (New Brunswick, New Jersey), W. COOK	
(Bonn, West Germany), AND M. HARTMANN	
(Baltimore, Maryland)	
On Cutting-Plane Proofs in Combinatorial Optimization	455
EARL R. BARNES (Yorktown Heights, New York)	
Circular Discs Containing Eigenvalues of Normal Matrices	501
M. GRÖTSCHEL (Augsburg, West Germany) AND K. TRUEMPER	
(Richardson, Texas)	
Master Polytopes for Cycles of Binary Matroids	523
C. A. J. HURKENS (Tilburg, The Netherlands)	
On the Existence of an Integral Potential in a Weighted Bidirected Graph	541
BO HENRY LINDQVIST (Trondheim, Norway)	
Asymptotic Properties of Powers of Nonnegative Matrices, with Applications	555
REFAEL HASSIN AND NIMROD MEGIDDO (Tel Aviv, Israel)	
On Orientations and Shortest Paths	589
N. S. MENDELSON AND R. PADMANABHAN (Winnipeg, Canada)	
Self-Inscribed Polygons with Vertices on Nonsingular Cubic Curves	603
COLLETTE R. COULLARD (West Lafayette, Indiana) AND	
WILLIAM R. PULLEYBLANK (Waterloo, Canada)	
On Cycle Cones and Polyhedra	613
SUSUMU HORIGUCHI AND WILLARD L. MIRANKER	
(Yorktown Heights, New York)	
Noisy Sort, A Memory-Intensive Sorting Algorithm	641

Table of Contents Continued

MICHAEL DOOB (Winnipeg, Canada)	
The Limit Points of Eigenvalues of Graphs	659
ARTHUR F. VEINOTT, JR. (Stanford, California)	
Conjugate Duality for Convex Programs:	
A Geometric Development	663
NOGA ALON (Tel Aviv, Israel), STEVEN COSARES	
(Piscataway, New Jersey), DORIT S. HOCHBAUM	
(Berkeley, California), AND RON SHAMIR (Tel Aviv, Israel)	
An Algorithm for the Detection and Construction of	
Monge Sequences	669
ARTHUR F. VEINOTT, JR. (Stanford, California)	
Representation of General and Polyhedral Subsemilattices and	
Sublattices of Product Spaces	681
R. B. BAPAT (New Delhi, India) AND T. E. S. RAGHAVAN	
(Chicago, Illinois)	
An Extension of a Theorem of Darroch and Ratcliff in	
Loglinear Models and Its Application to Scaling	
Multidimensional Matrices	705
JOEL FRANKLIN AND JENS LORENZ (Pasadena, California)	
On the Scaling of Multidimensional Matrices	717
URIEL G. ROTHBLUM (Technion City, Israel) AND HANS SCHNEIDER	
(Madison, Wisconsin)	
Scalings of Matrices Which Have Prespecified Row Sums and	
Column Sums via Optimization	737
URIEL G. ROTHBLUM (Technion City, Israel)	
Generalized Scalings Satisfying Linear Equations	765
MICHAEL H. SCHNEIDER (Baltimore, Maryland)	
Matrix Scaling, Entropy Minimization, and Conjugate Duality.	
I. Existence Conditions	785
WALTER GANDER, GENE H. GOLUB (Stanford, California) AND	
URS VON MATT (Zürich, Switzerland)	
A Constrained Eigenvalue Problem	815
CHARLES A. MICCHELLI (Yorktown Heights, New York) AND	
HARTMUT PRAUTZSCH (Troy, New York)	
Uniform Refinement of Curves	841
AUTHOR INDEX	871

